

Winter 2013

The Quarterly Hail

National Weather Service - Hastings, Nebraska

Volume 3, Issue 4



Notes From the Meteorologist In Charge

Harvest is concluding which means we will soon be experiencing more and more winter weather for the next few months. This year's fall pattern was fairly active. If you are a fan of precipitation (snow) and slightly cooler than normal weather, you would hope the fall weather pattern continues. I haven't heard anyone very confident in making a winter forecast due to the lack of a "strong signal" in the atmosphere and I'm not either. So, as usual, we will have to wait and see. The best thing we can do is be prepared for the worst.

Taking a quick look back at what we have been through these last few months, the Platte River flood was definitely a huge event for our office. We learned a lot from that flood that will benefit our river forecasting abilities for years to come, thanks to the staff's hard work and dedication. The ultimate goal is to provide the best warning service we can for future flooding events. Other than the sporadic thunderstorm complex that produced record heavy rainfall or large hail, the fall was fairly uneventful.

Finally, I would be remiss not to mention the hardship the staff has been through between the government shutdown and the extreme budget cuts we have fought through the last year. Many programs, training and science sharing opportunities and public interaction events had been canceled or lost due to these difficult budget times. Even though the staff was required to report for work and were not receiving a paycheck, the staff continued their laser-like focus on the mission of protecting lives and property. Please know you have an extremely dedicated staff of professionals that are always watching the weather and warning you no matter what they have to work around. This staff finds ways to get the job done with very few resources. Due to their desire to provide the best services and products possible, they find innovative ways to get it done. Please join me in thanking them for their outstanding service through all the adversity they have traversed!

In any case, it is the time to start preparing for winter weather conditions. In the spirit of the national campaign called "Weather Ready Nation", we hope you will take a few minutes and think about if your vehicle and home are ready for winter storms. Have you thought about how long you could make it in an ice storm, blizzard or just a 6 inch snowfall? We can help give you a heads up. Weather forecasting for winter weather has steadily improved through the years and now we are amazingly accurate, especially compared to when I began my career in the mid 1980s!

Until we meet again, please be safe and stay aware of the upcoming weather.

Steve Eddy
Meteorologist In Charge, National Weather Service Hastings, Nebraska
Steven.eddy@noaa.gov
402-462-2127 x642



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Special Points of Interest:

- Learn about different types of snowfall maps.
- How often does the area see a "White Christmas"?
- Before traveling, check out the road conditions!
- What are the warmest New Year's Day High Temperatures on record for the Tri-Cities?

Your Weather History - White Christmas - *Julia Berg, General Forecaster*



When we think of Christmas, many of us think of the postcard with snow falling on a white ground with twinkling lights.

Christmas in this part of the country is not always white, in fact, there is a lesser chance of having a white Christmas than a brown one. Much of this area is expected to only have a 25 to 40 percent chance that there will be a white Christmas.

Looking at some statistics for Christmases of the past:

| | Grand Island, NE | Greeley, NE | Alton, KS |
|------------------------------------|------------------------|-------------------------|------------------|
| Warmest High Temp | 62 in 1999, 1963, 1922 | 65 in 1963 | 73 in 1950 |
| Coldest High Temp | 7 in 1983 | 7 in 2000, 1990 | 15 in 2000 |
| Coldest Low Temp | -16 in 1983, 1924 | -18 in 1983 | -11 in 1924 |
| Warmest Low Temp | 34 in 1959 | 32 in 1954 | 35 in 1959, 1936 |
| Most Precipitation | 0.51 in 2009 | 0.92 in 1982 | 0.49 in 1982 |
| Most Snowfall | 7.8 in 2009 | 8.0 in 1982 | 5.0 in 1997 |
| Greatest Snow Depth | 20 in 1968 | 12 in 2008 | 8 in 1997 |
| Temperatures in Degrees Fahrenheit | | Precipitation in Inches | |

The last big snowfall event for Christmas was in 2009. Due to strong winds whipping the snow around, there were many locations that saw blizzard conditions with visibilities reduced to less than a quarter mile. There was certainly plenty of snow to blow around, during the period from December 23rd-27th, there were many locations with over 5 inches reported. The greatest was 15.7 inches in Osceola and Shelby, Nebraska. South central Nebraska felt the brunt of the heavy snow with most of the readings over 6 inches in Nebraska. North central Kansas varied from 1 to 6 inches.

Cooperative Observer Length of Service Award - *Mike Reed, HMT*

Dodie and Jay Thompson, our cooperative observers in Wolbach, Nebraska, were presented the 10 Year Length of Service Award on September 13, 2013.

They started as observers on January 17, 2003.

During their time as observers through October 2013, they have measured over 322 inches (almost 27 feet) of precipitation.



How the Shutdown Impacted the NWS and its Employees

Question: Why did the government shut down?

Answer: On September 30, 2013, the United States Congress and the President failed to reach a budget agreement to fund operational government services for Fiscal Year (FY) 2014. FY2014 runs from October 1, 2013 to September 30, 2014. With the failure to appropriate funds to support government operations, a “government shutdown” ensued for 16 days, finally ending on October 17, 2013.

Question: What is a government shutdown?

Answer: A government shutdown is a temporary halt in government services. Not all government services were unavailable and some government agencies were allowed to continue working, but not necessarily to the extent which would be expected during normal operations.



Question: Did the National Weather Service (NWS) shutdown?

Answer: No. All NWS employees at field offices like Hastings were “excepted” employees and therefore required to work. There were some NWS employees at Regional and National institutions who were on furlough and therefore, by law, not permitted work.

Question: Why were some NWS employees given “excepted” status?

Answer: Forecasting the nation’s weather is paramount to the “*protection of life and property*” for the people of the United States. To maintain this goal, it is critical all functions related to the forecasts, warnings and advisories are maintained at the highest level, and that includes the need for meteorologists to work as normal.

Question: Did the shutdown directly impact the NWS’s ability to forecast?

Answer: No. All essential human and capital resources were maintained during the shutdown which directly supported “*the protection of life and property*”. When severe weather impacted south central Nebraska and north central Kansas in early October, the NWS Hastings office was fully staffed, allowed to call in extra staff, repair equipment, etc. as needed.

Question: Were any NWS services curtailed during the shutdown?

Answer: Yes. Technically, services NOT related to “the protection of life and property” were not performed. This included many outreach related events, such as school visits, tours of the office and select training opportunities. Nearly all procurement was stopped. Travel was not allowed. Some equipment related issues were not addressed either. Some website sites at National Oceanic and Atmospheric Administration (NOAA) level which direct users to NWS sites were not available or maintained.

Question: How did the government shutdown impact NWS employees?

Answer: Though required to show up for work, NWS employees were only paid for work performed prior to September 30, 2013. This resulted in about ½ the normal pay for the first pay check in October. NWS employees were also required to be at work as scheduled. Vacation, sick leave, personal leave and other types of leave were not allowed. Many NWS employees juggled their schedule (i.e., switched days off or adjusted hours worked) to fit the needs of their families and personal life without taking leave. Only in extreme cases, such as a family or medical emergency, were employees granted leave. Some employees with previously scheduled events, such as expensive, non-refundable travel, could choose the option of being on “furlough”, knowing full well they may not be able to adjust the time to vacation leave or receive back pay when they return. In the end, all NWS employees were paid in full once appropriations were available.

Product Highlight - Briona Saltzman, Meteorologist Intern

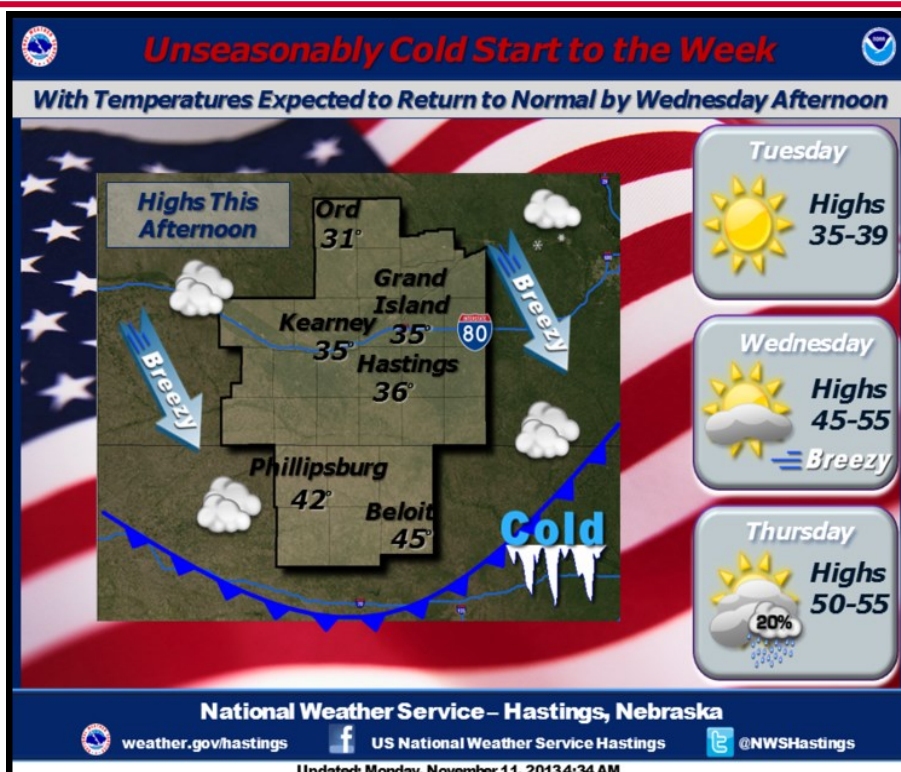
Did you know the National Weather Service issues other products daily outside of the normal 7 day forecast? In fact, we offer a variety of products each day that can help you make your weather driven decisions. In this article, we will try to point out a few different products that might make your life a bit easier. We will tell you where to find them and what they can do for you. Check it out!

What: Weather Story

How to find it: Navigate to our website: www.weather.gov/hastings. Scroll about half way down the page underneath the map. You will see a line of 4 thumbnail images. The first thumbnail will be the “weather story.”

Information it provides: The weather story is a graphical depiction of the most important weather feature over the next week. This image essentially shows the biggest “weather story” over the upcoming week. Forecasters use a variety of different methods to tell the story. From maps and graphs to text and photos, we try to highlight the most important aspects in the weather forecast. Sometimes the weather story will simply highlight high temperatures for the next day; other times it might show areas of concern for a hazardous high impact event in the next few days.

The weather story is issued each day and is updated with the latest information. We encourage you to view the weather story to gain a better understanding on what we think is the most significant weather for the week.



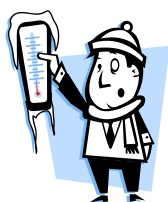
Employee Spotlight - Carol Cartier, Information Technology Officer

Carol was born in Anchorage, Alaska shortly before North America’s biggest earthquake occurred, nearly leveling her hometown. Her father homesteaded a large acreage just outside Anchorage in the small community of Eagle River where Carol grew up. At 18 years old, she started her long career with the federal government working as a clerk in the Judge Advocate General’s office at Fort Richardson Army Base just a few miles from her home. After attending the University of Alaska-Anchorage she continued on in her federal career and has worked in several federal agencies, including HUD, Bureau of Land Management, Forest Service, Homeland Security and the National Weather Service, where she has spent the most time. Advancing up the ladder of government and following her field in information technology, Carol’s career has taken her from Alaska to Mississippi, California, Arizona and in and out of Alaska a few times. Carol finally landed in Hastings, Nebraska. Unlike other agencies she’s worked for, working for the NWS has been fascinating because of all of the dynamics of weather, especially in a place like Nebraska.



Carol has three children, Erik, Mikel and Tayler. Erik is in the oil industry and works along the coast of the Arctic Ocean. Mikel is in the US Navy and is stationed in San Diego, California where he works on Naval aircraft. Tayler is in Phoenix and is in college and experiencing “Big City Life”. Married to Rich, the City Planner of Hastings, they are now empty nesters and enjoy traveling and cycling. During summer, they spend most evenings riding their bikes around Hastings and Grand Island, or finding a new trail to ride somewhere around Nebraska. Carol and her husband also have traveled quite a bit and have been to all 50 states and Canadian Provinces as well as Iceland, Western Europe and their personal favorite, the islands of Samoa in the South Pacific.

Holiday Travels Word Search



N S C O Y N T R Q K I N V D Q J Y T F C D L X Z F J Z O K I
 D R I F T O L S U N S H I N E L E L D F A A O L S W J I S M
 J E R D R Y B J F H M B Q A L M U O E M E I C L O U D S M Z
 H F J V T E D C L N F Y V I P R Y L X K A Z D I Q F K W I S
 W D A N B Z E J V E J Z H E R V S P D G Q Y D Y S G P Q O E
 W Z H A Q I X Z P Y P C R I O F J P D I E B A C E R P E V R
 S T N E S E R P I H V A E C S U Q R B F G Y A G B E I I X U
 I I W W H U E B Z N T S E I P G A K T R N I G W W H T C D P
 B N O K G G C L I U G P I F W Z R B H E C H R Q D T G E Q I
 Y L P U R R B J R B M R G K Z T J Y A E V D L F I A S M U H
 D Q U B Q Z M E N G J Z A I O V R C N Z E G W S L E U C U Q
 H I G S N S S M F M P A L I P S M R K I A O H V F W N I A R
 O L V L T O A O R W N B V A N P C U S N I G I H N M D D G W
 W X M U O E G M C G O P W S B M H N G G I W Y Q H D K R N Y
 W Z T U R V R D T X R A C F O O F P I H Y W D L Q O I K J T
 Q B E G V I E Y L S Y M O Q Y B F J V J E A S E H P M K E U
 U E E F V G H S M E I A A Q P S C P I H Z L R I R A K X J L
 O A L M Z O J Q E J K R T P O R G X N H R S G B Z I T E H T
 U Y S P T H O G H R U S H U R K E O G T A G Q F U U L U F D
 P R S I J T E L W V L K V C Q E E V U T O A N W U U Y P E Q
 S O P L E H M V C P N D E M S Y E R N N Q D W I O J I S K S
 Q S R U U B S F G T Z P S Q Q A K D Z P R N H W N N F I B S
 M I L J B V J U M R W N T S S E N M O E A I Z D J R S W E L
 A V I W Q B P D Y C Y X R E Y Z X T R K T W H O Z V A C L Q
 F D D R Z K G R F A M B A E D S W G A N Q A G L P F R W K C
 U A A K H C U F U A Z C V W Q V T R J S H U C K T E W L S E
 E T A L O C O H C T O H E M Z E V Q O S M A M W Q C C T X C
 D R Y P R Z O S F V X I L T N R E T N I W F L S B T A T O V
 C B N B W S C Z H X G Q N C E N W G P B H C S S K T Y L T L
 J I E O D U S N S B J L M H Z W Q T D E X S F B Y T D A L W

ADVISORY

CHILLY

COAT

DRY

FREEZING

GLOVES

HOT CHOCOLATE

PIE

SANTA

SUNSHINE

TRAVEL

WEATHER

BLIZZARD

CHRISTMAS

COLD

FLURRIES

FREEZING RAIN

HAT

ICE

PRESENTS

SLEET

TEMPERATURES

TURKEY

WIND

BLUSTERY

CLOUDS

DRIFT

FOG

FRIGID

HIGHS

LOWS

RAIN

SNOW

THANKSGIVING

WARNING

WINTER



Just GIS: The 2012-13 Snowfall Season - Joe Guerrero, Meteorological Intern

The following three maps depict seasonal snowfall normals, observed seasonal snowfall and seasonal snowfall departures for the 2012-13 season.

The “normal” of a particular variable, in this case snowfall, is simply defined as the 30-year average. These data sets come out every 10 years from the National Climatic Data Center (NCDC) and are considered a running 30-year average. The maps below were made from data which span over a period from 1981-2010.

Our observed “seasonal snowfall” is recorded by volunteers across the NWS Hastings coverage area, known as NWS Cooperative Observers (COOPs). We greatly appreciate our COOPs because without them we would lack valuable precipitation information. This data is very important to catalog each event.

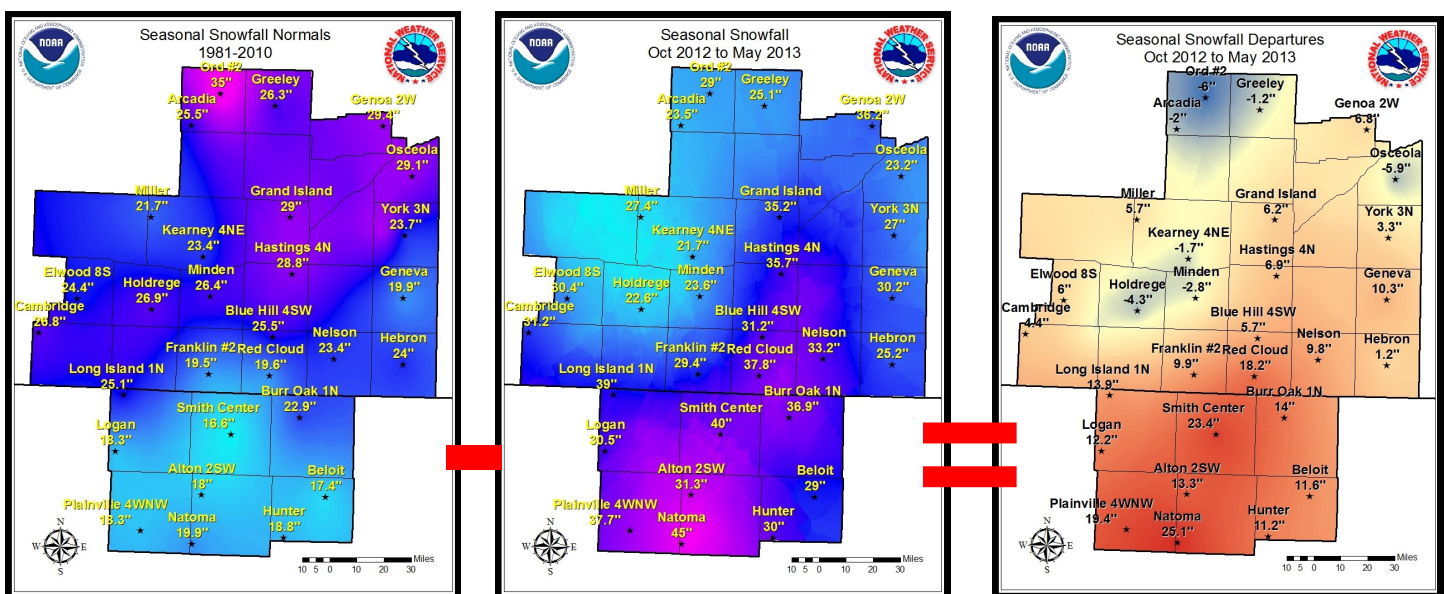
The “seasonal snowfall departure” is simply the difference between normal snowfall and observed snowfall.

Once we receive the information from our COOPs, we can enter the data into a geographic information system (GIS) to create a map of the area. Obviously we do not have observers at every location of our forecast area, so we must interpolate between sites to get an understanding of what happened across the entire area. It is not completely perfect, but it can give us an idea of what occurred. Once the map has been interpolated, we then apply a color curve to show variance across the forecast area and point out possible areas of interest. The labels reflect observed values from our COOPs and not interpolated values.

Analyzing the maps of the 2012-2013 season, when comparing the normal map and the observed map we can see a “mirrored” image. In other words, the location of normal snowfall amounts which are typically higher (northern counties) were flipped with this season’s observed values, and our southern counties actually received more snowfall than their counterparts across the north. This was largely in part due to a winter storm on February 20-21st which dumped anywhere from 10-20 inches on portions of north central Kansas. We can see this detailed better on the departure map, which shows above normal values across the south and below normal values across our northern counties.

Some of you may remember the snowfall events that lead to these higher amounts across our southern counties. Depending on your outlook of winter weather, some folks were either disappointed or rather happy this last winter. How did your area fair last winter? Take a look at the maps below and find out.

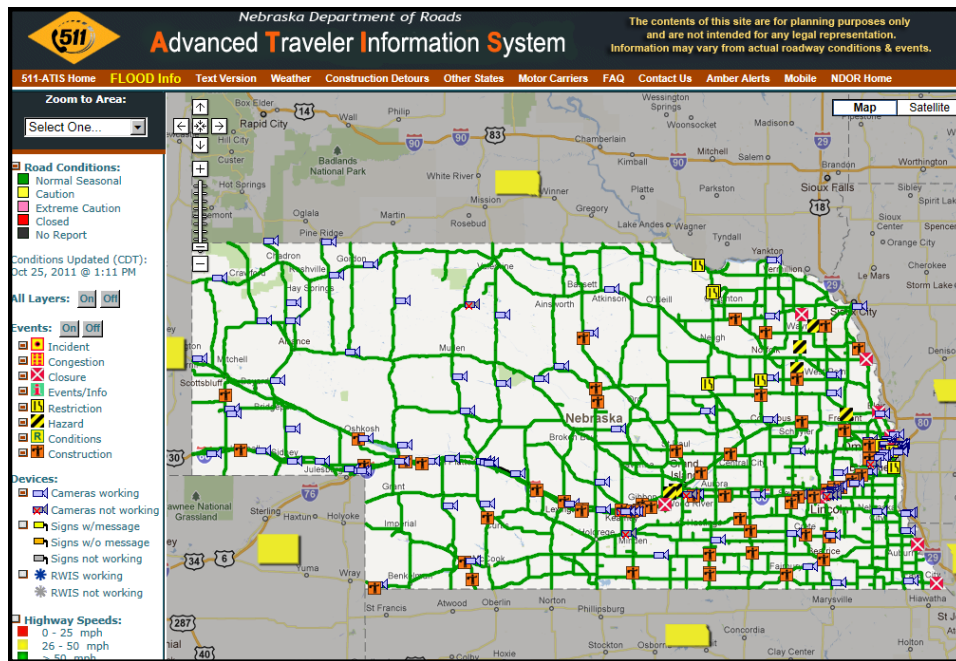
Don’t hesitate to check us out on Facebook or Twitter and post your questions, comments or snowfall amounts during and after events this winter. Lastly and most importantly, be safe and stay informed about weather conditions across your area!



Going On A Trip? Check Out Road Conditions Before You Leave!

Before you travel, check out the latest road conditions. Road report information across Nebraska can be found at the Nebraska Department of Roads web site at:

<http://www.511.nebraska.gov/atis/html/index.html>



For Nebraska **in-state information call 511**. When out of state call: 1-800-906-9069

South Dakota: <http://www.safetravelusa.com/sd/>

Out of state: 1-866-MY-SD511 (1-866-697-3511)

Wyoming: <http://map.wyoroad.info/>

Out of state: 1-888-WYO-ROAD (1-888-996-7623)

Colorado: <http://www.cotrip.org/roadConditions.htm>

Out of state: 1-303-639-1111

Kansas: <http://511.ksdot.org/>

Out of state: 1-866-511-KDOT (1-886-511-5368)

Missouri: <http://traveler.modot.org/map/>

Out of state: 1-888-ASK-MDOT
(1-888-275-6636)

Iowa: <http://511ia.org>

Out of state: 1-800-288-1047



National Traffic and Road Closure Information can be found at:

<http://www.fhwa.dot.gov/trafficinfo/index.htm>

2013 Severe Weather Recap - Mike Moritz, Warning Coordination Meteorologist

Only 10 days after a blizzard brought 50+ mph winds and blinding snow to the region, the first tornado of the season occurred unexpectedly on **March 19th** near Shelton, NE. This brief, EF-0 rated tornado lasted only a few minutes as it spun in a field north of Interstate 80. No damage was reported. March wrapped up with quarter size hail covering the ground near Beaver City, NE on the **29th**.

The atmosphere was still “cold” going into April, but that didn’t stop severe weather from wreaking havoc on April **8-9th** across the area. Ping pong size hail fell near Plainville, KS, while a carport was blown apart by high winds near Lebanon, KS. To the north, 80+ mph winds whipped into Kearney, NE and caused substantial damage on the University of Nebraska-Kearney campus. The most significant damage was done to the roof of the library. Hail was common across the rest of the region, and a few locations reported over 3” of rain.

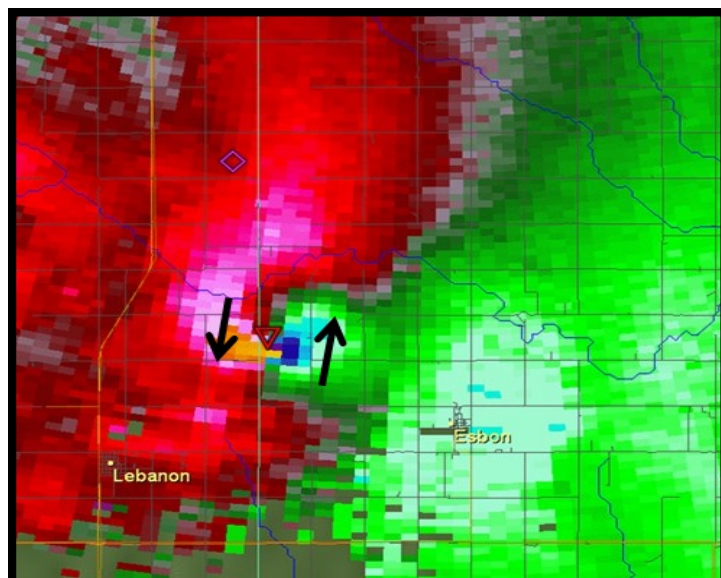
As usual, May brought the big uptick in severe weather to the area. On the **19th**, 70 mph winds blew through Osborne and Mitchell counties in north central Kansas. Power poles were busted and the roof was damaged at the lumber yard in Glen Elder. On the same day to the north, a brief, EF-0 rated tornado destroyed a trailer in rural Greeley County Nebraska. There were no injuries.

The unfortunate “highlight” in May was on the **27th** with a strong EF-3 rated tornado north of Lebanon, KS. This tornado inflicted major damage to four farmsteads with damage in the millions. At one point, this tornado was just under mile one wide and likely produced winds of 140-150 mph. That same storm produced tennis ball to softball size hail in Jewell County, KS with the largest stone measured at 5.25” in diameter near Montrose. On the same day in south central Nebraska, an EF-2 rated tornado gutted most of the trees in Edgar, NE before continuing on its 4 mile path east of town. 70 to 90 mph winds were common east of Hastings and south of York during this storm. Damage to center irrigation pivots was in the millions of dollars. Similar to Kansas, large hail was reported with these storms as they moved through.

May wasn’t done as more severe weather struck the area on the **28th** and **29th**. A brief, EF-1 rated tornado damaged a farmstead near Prairie View in western Phillips County Kansas. Winds of 60 to 70 mph were common that

evening in north central Kansas as the storms rolled east. To the north in Nebraska, and despite a rather cool and cloudy day, a mini-tornado outbreak occurred along a frontal boundary on May 29th. Reports and storm surveys turned up at least 7 different tornadoes that afternoon. One tornado skipped across Interstate 80 just east of the York interchange and continued north from there. The tornadoes actually got started to the south in Clay County early in the afternoon. Most of the damage was minor, although the total dollar sum easily came to over one million dollars in the end. The strongest rated tornado that day was an EF-1 with winds estimated at 110 mph along its 16 mile path from near McCool Junction to Thayer.

June is always an active month for severe weather and this past June was on par with recent years. In north central Kansas, most of the action occurred between **June 16th** and **June 27th**. There were several events which produced damaging hail and high winds. Quarter size hail was the most common report, but when teamed with 60+ mph winds, crop damage was likely significant in some locations. Numerous trees were reported damaged in the Osborne, KS area on the **16th**. In Nebraska, crop damage was also a common theme during storms which rumbled from the **14th** through the **25th**. Minor flooding occurred on the Thompson Creek near Riverton, NE on the **17th**, forcing the closure of some roads. High winds tore up a machine shed and power poles in Valley County west of Ord on the **21st**. A peak wind gust of 63 mph was measured at the Evelyn Sharp Field in Ord on **June 21st**. Ironically, the very next day, a wind gust of 67 mph was again measured in Ord. Elsewhere on the **22nd**, a swath of crop damage about 7 miles long was caused by high winds and hail in southern Gosper County. Though only the size of pennies, a hail storm on **June 23rd** covered Interstate 80 east of Gibbon causing traffic slowdowns.

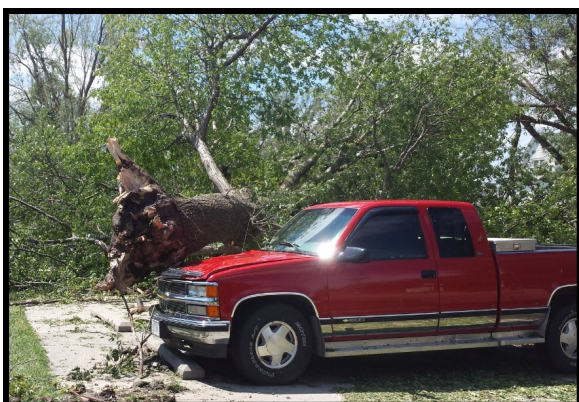


This radar image of the wind within the storm shows the tight circulation of the tornado as viewed from the NWS Hastings Doppler radar in Blue Hill, NE. The arrows represent which direction the wind is blowing and the small upside-down triangle is the approximate location of the tornado as it crossed into Jewell County on May 27th.

Severe Weather Recap - Mike Moritz, Warning Coordination Meteorologist

Typically July brings a downturn in the amount of severe weather in the area. For the most part, July 2013 did just that, although there were a few notable exceptions. On **July 9th**, a brief, EF-0 rated tornado set down in far northern Dawson County Nebraska. Thankfully, the region is sparsely populated and no damage was reported. On **July 24th**, high winds and hail rolled through much of Valley, Sherman and western Howard counties in south central Nebraska. Straight-line winds estimated at 100 mph heavily damaged a two-story barn southwest of North Loup. Earlier, that same storm, packing winds of 85 mph at the time, damaged a roof on a home south of Ord. Unfortunately, at the height of corn and soybean growth, the high winds teamed with ping pong ball size hail to ravage thousands of acres of crops in the area. Crop yield loss from the hail was in the tens of millions of dollars.

One of the more unique July 2013 events was a heat related event on **July 9th**. Temperatures in the lower 90s along with dew points in the lower 70s caused heat indices of well over 100° for much of the area. After the cold spring and cool start to the summer, this type of heat was quite a shock for man and beast. The sad news is several hundred cattle in south central Nebraska succumbed to the heat, humidity and lack of sufficient ventilation (wind) on the afternoon of the 9th. The worst losses were reported in Polk and Dawson counties in south central Nebraska. This was the worst cattle loss death due to heat in the area since 2009.



Tree damage in Edgar on August 1st.

August 1st brought another round of severe weather to the region. Thunderstorms started in northern Nebraska and rolled south across much of south central Nebraska and north central Kansas. To the east of Hastings, in Clay County, some of the worst hail losses of the season occurred. Late season corn and soybean crops were pummeled to nothing by 80 mph winds and ping pong ball size hail for 15 or 20 miles. Toward the end of the hail swath, the town of Edgar took another beating with straight line winds likely pushing 100 mph tearing apart trees on the north half of town. If you remember, Edgar was struck by a tornado just 2 months prior on May 27th! Once again, losses added up into the millions of dollars.

Fortunately, after the August 1st hail, wind and rain storm, the rest of August was relatively quiet. By mid-month, summertime heat was well in force across the entire region. The hot spell would last the better part of a month before giving way late in September.

Mother Nature wasn't quite done despite the calendar flipping to autumn. Though hard to fathom, a rare, extremely heavy rainfall event in Colorado would eventually transform the dry Platte River bed into a raging torrent of water. For most of the last two weeks of September, folks across the Platte River in south central Nebraska got to experience a rare Rocky Mountain induced flood. Flooding was most common upstream of U.S. Highway 281, or roughly upstream of Grand Island. The KOA Campground near Gothenburg was completely under water. Fortunately, river forecasts for the high water were issued well in advance, which allowed for early planning and mitigation by local officials.

Finally, an unusual and record breaking rain event doused much of the area on **October 2nd and 3rd**. As much as 8" of rain fell in Greeley County with thunderstorms training over that area. Many locations across the rest of the region reported over 4" of rain, which caused minor flooding in some cases.



Platte River Flooding near Kearney on September 26th.

Platte River Flooding - *Dave Pearson, Service Hydrologist NWS Omaha/Valley*

In a normal September, the Platte River in Nebraska is more like a long dirt path than a river. During this time of year on the Platte River it can be more common to see folks lounging on the dry river bed than boating or fishing in its meager channels. As the calendar changed to September in 2013, this year appeared to be no different than years past. Then, in an instant, everything changed. During the week of September 8th, heavy rain fell in Colorado. The word “heavy” doesn’t quite do this rain justice; perhaps “historic” would be a more appropriate adjective. In the course of a week, areas in and around Boulder received their annual precipitation in a matter of days. Precipitation totals around Boulder averaged 18 to 19 inches for September. Normally the Boulder area sees about an inch of rainfall during September. As one would expect, this historic rain caused catastrophic flooding in Colorado. Tragically, eight people died as a direct result from the flooding. Additionally, many homes, businesses, bridges and roads were destroyed.

On September 19th, the floodwaters entered Nebraska via the South Platte River. Major flooding was observed all along the South Platte River. On September 20th the USGS river gage at Roscoe crested at 12.2 feet, which was almost one foot above the previous record. Several miles downstream, the gage at North Platte crested at 14.4 feet, which exceeded the previous record, set in 1935, by only a few inches.

As the floodwaters on the South Platte River began to recede, the water entered the Platte River. From the confluence of the North and South Platte rivers near North Platte, to the city of Grand Island, moderate to minor flooding was observed along the Platte River. Thankfully in Nebraska no lives were lost as a result of the flooding. Some property damage did occur and for the most part those areas affected will fully recover. The historic rains in Colorado were a stark reminder of how little, if any, control we have over rivers and flooding. Prior to this flood, how many people really knew a historic rain in Colorado could cause flooding in Nebraska? Of course this wasn’t the first time it’s happened and it won’t be the last. As 2013 comes to a close, let us remember those lives that were lost in The Great Colorado Flood of 2013 and let us not forget those in Nebraska who were affected as well. Just as important, let us not forget the power of nature and that floods like this can and will happen again.



Platte River at Gothenburg looking east.
Photo taken on September 20th.



Platte River at Gothenburg looking east.
Photo taken on September 23rd.



Platte River at Grand Island looking northeast.
Photo taken on September 20th.



9/29/2013 - Photo Courtesy of Julia Berg

Platte River at Grand Island looking northeast.
Photo taken on September 29th.

This Table Reflects Various Historical Winter Extremes Across The Local Area...

| | Warmest New Year's Day <i>High Temp</i> On Record | Coldest New Year's Day <i>High Temp</i> On Record | Coldest New Year's Day <i>Low Temp</i> On Record | Highest Calendar Month Snowfall (Dec.-Feb.) | Highest 7-Day Total Snowfall (Dec.-Feb.) |
|--------------|--|--|---|--|--|
| Grand Island | 64° / 1939 | -6° / 1924 | -23° / 1974 | 29.7" / Feb. 1915 | 21.1" Dec. 18-24, 1968 |
| Hastings | 63° / 1997 | 2° / 1979 | -19° / 1974 | 31.0" / Dec. 1973 | 21.5" Jan. 14-20, 1960 |
| Kearney | 63° / 1939 | 0° / 1979 | -14° / 1974 | 36.0" / Dec. 1924 | 21.5" Dec. 3-9, 1924 |
| Loup City | 67° / 1939 | 2° / 1942 | -23° / 1974 | 25.0" / Feb. 1978 | 18.5" Dec. 19-25, 1968 |
| Cambridge | 62° / 1943 | 6° / 1942 | -20° / 1901 | 28.0" / Dec. 1924 | 23.0" Dec. 25-31, 1982 |
| Alton, KS | 71° / 1939 | 6° / 1924 | -20° / 1974 | 21.0" / Jan. 1932 | 17.0" Feb. 22-28, 1912 |
| Beloit, KS | 65° / 2005 | 5° / 1974 | -13° / 1974 | 20.5" / Feb. 2004 | 20.5" Feb. 2-8, 2004 |

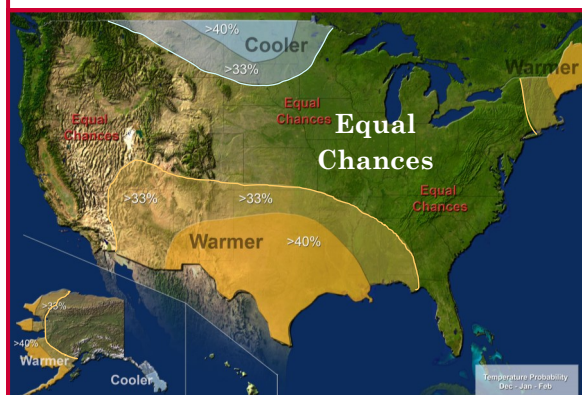
Winter Climate Outlook Detailed Below...

The latest Winter Outlook from the Climate Prediction Center indicates **equal chances** of experiencing above normal, below normal, or near normal temperatures and precipitation across South Central Nebraska and North Central Kansas. The NWS officially considers the "Winter" season to be all of December, January and February.

Temperature: The outlook on the right reflects a forecast for the 3-month period as a whole. We tend to view temperatures in the context of a daily or monthly average, but the 3-month outlook accounts for the entire season. **Orange/brown** colors represent "**warmer**" than normal and **Blue** colors represent "**cooler**" than normal. The green area labeled "Equal Chances" designates regions with equal chances of having above, near or below normal temperatures. This means that there is not a strong or reliable enough "climate signal" to favor one of these outcomes over another. As the image shows, the local area is *entirely* in the "equal chances" portion of the outlook. According to Mike Halpert of the Climate Prediction Center: "It's a challenge to produce a long-term winter forecast without the climate pattern of an El Niño or a La Niña in place out in the Pacific because those climate patterns often strongly influence winter temperature and precipitation here in the United States. Without this strong seasonal influence, winter weather is often affected by short-term climate patterns, such as the Arctic Oscillation, that are not predictable beyond a week or two. So it's important to pay attention to your local daily weather forecast throughout the winter."

Precipitation: Similar to temperatures, the precipitation outlook depicts the total precipitation for the entire 3-month period, and is independent of individual days or months. **Blue** colors represent "**wetter**" than normal and **Orange/brown** colors represent "**drier**" than normal. The green area labeled "Equal Chances" designates regions with equal chances of having above, near or below normal precipitation. As depicted, the local area is in the same boat regarding the winter precipitation outlook as it is for the temperature outlook. This means there is no clear trend in the forecast analysis to support one of these outcomes over another.

Temperature Outlook for Winter 2013-2014 (December-February)



Precipitation Outlook for Winter 2013-2014 (December-February)



To view these and other Climate Prediction Center outlooks visit <http://www.cpc.ncep.noaa.gov/>

National Weather Service

Weather Forecast Office
6365 Osborne Drive West
Hastings, NE 68901

Phone: 402-462-2127

Website: www.weather.gov/hastings

E-mail: w-gid.webmaster@noaa.gov

Facebook: US National Weather Service Hastings

Twitter: @NWS Hastings



Meet the Rest of the Staff at WFO Hastings

Meteorologist-In-Charge

Steve Eddy

Warning Coordination Meteorologist

Mike Moritz

Science and Operations Officer

Rick Ewald

Data Acquisition Program Manager

Marla Doxey

Electronic Systems Analyst

Mark Fairchild

Information Technology Officer

Carol Cartier

Administrative Assistant

Victor Schoenhals

Electronics Technician

Mike Bergmann

Meteorological Intern / Hydrometeorological Technicians

Briona Saltzman • Joe Guerrero / Mike Reed • Phil Beda



Lead Forecasters

Merl Heinlein • Jeremy Wesely • Cindy Fay

Shawn Rossi • Scott Bryant

General Forecasters

Julia Berg • Angela Oder

Ryan Pfannkuch • Jeff Halblaub